



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,956	03/21/2008	Akira Takahashi	KAM 22.375 (100799-000124)	9411
26304 7590 01/14/2011 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER HANNON, THOMAS R	
			ART UNIT 3656	PAPER NUMBER
			MAIL DATE 01/14/2011	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,956	Applicant(s) TAKAHASHI, AKIRA	
	Examiner Thomas R. Hannon	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3656

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Applicant's Replacement Sheets of Drawings filed December 13, 2010 is noted.

Applicant has not addressed the Drawing objections noted on the Notice of Draftsperson's Patent Drawing Review PTO-948 attached to the previous Office Action.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. There is no support in the specification for claiming 1) one "of the both inward flange portions has a flexural concave portion formed at a base end section thereof and depressed from an inner peripheral surface of the cylinder portion", and 2) that this inward flange portion has an angle larger than the angle of the inside surface of the other inward flange portion. With respect to 1) above, nowhere in the specification is it disclosed that there is a flexural concave portion formed at a base end section of one of the flanges. With respect to 2), nowhere in the specification is

Art Unit: 3656

any language drawn to different angles on the same shell. While the drawings illustrate in Figure 2 two ends of a two sections of a shell, there is nothing to suggest that the two angles of the same shell be different. Throughout the specification it is "both inward flange portions" throughout. For example page 14, lines 17-20, define "An angle θ of both inside surfaces 10a and 10b, with respect to a virtual plane α which exists in a direction orthogonal to the central axis of the shell 1c, is made to be 30 to 20 degrees." Figure 2 includes two angles, each labeled θ , suggesting the extremes of the range defined. Nowhere is it suggested that the two angles of the same shell have one larger than the other.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite in line 16: "the angle of the inside surface of on of the both inward flange portions". For purposes of examination the phrase will be interpreted to be --the angle of the inside surface of one of the both inward flange portions--.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scharting et al. US 4,976,551 in view of Nakamura US 4,318,574.

Scharting discloses a shell-type needle roller bearing comprising: a shell (1) with both axial end portions of a cylinder portion bent radially inwards to forms a pair of inward flange portions; and a plurality of needles (2) which are provided so as to roll freely on a radial inside portion of the cylinder portion between inside surfaces of both inward flange portions, without

Art Unit: 3656

being retained by a cage (none is disclosed nor shown), in a state where they are directly adjacent and facing or in contact with the rolling surfaces of circumferentially adjacent needles, on both axial end surfaces of the needles, a portion nearer the center than a beveled portion on an outer peripheral portion, is shaped such that it does not project axially outwards more than an inner peripheral edge of the beveled portion. Scharting shows in Figure 1 one of the both inward flange portions (right side) having a flexural concave portion formed at a base end section thereof and depressed from an inner peripheral surface of the cylinder portion. Scharting does not disclose inclined surfaces on the inside surfaces of the flanges. Nakamura discloses a cylindrical roller bearing in which the inside surfaces of both inward flange portions (7) make up inclined surfaces (7a, 7b) which are inclined in a direction where a distance between the surfaces becomes narrower towards the radial outward direction, and in a state where the needles are displaced in the axial direction, contact portions between both axial end surfaces of the needles and the inside surfaces of the inward flange portions are positioned at portions close to the radial outside of the inward flange portions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inner surface portions of the flanges of Scharting to include inclined surfaces for the desired purpose of accurately controlling both the position of the contact point and the amount of the axial movement of the rollers, as taught and suggested by Nakamura. With respect to the one flange having a larger angle than the other, Nakamura suggests such a different angle in column 4, lines 53-58, in that the angles of the taper are dependent upon the loading and can be selected from a range of angles.

With respect to claim 2, Nakamura discloses an angle of the inside surfaces of both inward flange portions with respect to a virtual plane which exists in a direction orthogonal to a

Art Unit: 3656

central axis of the shell, is 3 to 20 degrees, and at both axial end surfaces of the needles, a portion nearer the center than the beveled portion is a flat surface.

With respect to claim 3, Nakamura is seen to disclose the claimed arrangement of the flange distance with respect to the roller diameter. Assuming arguendo that Nakamura does not disclose the claimed parameter ratios, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the flange size relative to the roller diameter, as a matter of routine engineering design.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scharing US 4,976,551 in view of Nakamura US 4,318,574 as applied to claim 1 above, and further in view of Deutsch US, 3,501,210.

Scharing does not disclose the needles being affixed to an inner peripheral surface of the shell using grease. Deutsch discloses a full complement set of rollers retained in an inner peripheral surface of the outer race. It would have been obvious to one of ordinary skill in the art at the time the invention was made to affix the rollers in the outer race of Scharing using grease, because this is taught and suggested by Deutsch as being an old and well known alternative of holding the parts in readiness for insertion of a shaft or other inner raceway (Col. 4, lines 39-43).

Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 3656

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Hannon whose telephone number is (571) 272-7104. The examiner can normally be reached on Monday-Thursday (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard WL Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas R. Hannon/

Application/Control Number: 10/566,956

Page 7

Art Unit: 3656

Primary Examiner, Art Unit 3656